

Serial No.: 10/749,255

Filing Date: 12/31/2003

Attorney Docket No. H0005200-5610/400.404US01

Title: SELF-HEALING LIQUID CONTACT SWITCH

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REMARKS

Claims 1-8, 10-29, 31-51, and 53-65 are pending in this application. Claims 66-69 were previously cancelled without prejudice. Claims 9, 30, and 52 are presently cancelled. Claims 10, 12, 13, 31-33, 43, 53, 55, and 56 have been amended to correct minor errors or provide proper claim dependencies. Reconsideration of the pending claims is respectfully requested in light of the following remarks.

Rejections Under 35 U.S.C. § 102

Claims 1, 6, 11, 13, 14, 20, 22, 27, 33, 34 and 40 were rejected under 35 USC § 102(b) as being anticipated by FR2402941 to Orega Circuits (hereafter "*Orega*"). Applicant respectfully traverses.

Independent claims 1 and 22 have been amended to recite "one or more wetable traces interconnecting said first and second plurality of liquid contact regions." Support for this limitation can be found in original claims 9 and 30, which the Examiner indicated contained allowable subject matter.

Accordingly, claims 1 and 22 should now be in condition for allowance. Since claims 6, 11, 13, 14, and 20 depend from claim 1, these claims include the limitations of claim 1 and should also be in condition for allowance. Since claims 27, 33, 34, and 40 depend from claim 22, these claims include the limitations of claim 22 and should also be in condition for allowance.

Applicant therefore respectfully requests that the rejection of claims 1, 6, 11, 13, 14, 20, 22, 27, 33, 34 and 40 under 35 U.S.C. § 102(b) be withdrawn.

Claims 18, 19, 38, 39 and 42 were rejected under 35 USC § 102(b) as being anticipated by *Orega* and U.S. Patent No. 3,488,760 to Julie (hereafter "*Julie*"). Applicant respectfully traverses.

*Julie* was cited for disclosing that heating means are inherent in reed relays, and thus the Examiner deemed a heating means to be inherent in the device of *Orega*. Nevertheless, there is no teaching or suggestion in these references of the "wetable traces" recited in claims 1 and 22. Since claims 18 and 19 depend from claim 1 and claims 38 and 39 depend from claim 22, these

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claims include the limitations of claims 1 and 22, respectively, and should also be in condition for allowance.

Independent claim 42 has been amended to recite that “at least one of said upper and lower actuating electrodes includes an S-shaped sloped surface.” Support for this limitation can be found in original claim 35, which the Examiner indicated contained allowable subject matter. Accordingly, claim 42 should now be in condition for allowance.

Applicant therefore respectfully requests that the rejection of claims 18, 19, 38, 39 and 42 under 35 U.S.C. § 102(b) be withdrawn.

Claims 1, 6, 11, 13, 14, 18-20, 22, 27, 33, 34, 38-40 and 42 were rejected under 35 USC § 102(e) as being anticipated by U.S. Patent No. 6,743,991 to Wong et al. (hereafter “*Wong* ’991”). Applicant respectfully traverses.

As discussed above, claims 1 and 22 have been amended to recite “one or more wettable traces interconnecting said first and second plurality of liquid contact regions.” Support for this limitation can be found in original claims 9 and 30, which the Examiner indicated contained allowable subject matter.

Accordingly, claims 1 and 22 should now be in condition for allowance. Since claims 6, 11, 13, 14, and 18-20 depend from claim 1, these claims include the limitations of claim 1 and should also be in condition for allowance. Since claims 27, 33, 34, and 38-40 depend from claim 22, these claims include the limitations of claim 22 and should also be in condition for allowance.

As discussed above, claim 42 has been amended to recite that “at least one of said upper and lower actuating electrodes includes an S-shaped sloped surface.” Support for this limitation can be found in original claim 35, which the Examiner indicated contained allowable subject matter. Accordingly, claim 42 should now be in condition for allowance.

Applicant therefore respectfully requests that the rejection of Claims 1, 6, 11, 13, 14, 18-20, 22, 27, 33, 34, 38-40 and 42 under 35 USC § 102(e) be withdrawn.

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Rejections Under 35 U.S.C. § 103

Claims 4 and 25 were rejected under 35 USC § 103(a) as being unpatentable over *Orega* and further in view of U.S. Patent No. 4,368,442 to Yamaguchi et al (hereafter "*Yamaguchi*"). Applicant respectfully traverses.

*Orega* was cited for disclosing a wettable contact region, and *Yamaguchi* was cited for teaching a contact region made of platinum. Nevertheless, there is no teaching or suggestion in these references of the "wetable traces" recited in claims 1 and 22, from which claims 4 and 25 depend.

Thus, claims 4 and 25 would not have been obvious over *Orega* in view of *Yamaguchi*. Applicant therefore respectfully requests that the rejection of claims 4 and 25 under 35 U.S.C. § 103(a) be withdrawn.

Claims 5 and 26 were rejected under 35 USC § 103(a) as being unpatentable over *Orega* and further in view of U.S. Patent No. 3,327,263 to Korn (hereafter "*Korn*"). Applicant respectfully traverses.

*Orega* was cited for disclosing use of mercury, and *Korn* was cited for teaching that gallium is an equivalent material. Nevertheless, there is no teaching or suggestion in these references of the "wetable traces" recited in claims 1 and 22, from which claims 5 and 26 depend.

Thus, claims 5 and 26 would not have been obvious over *Orega* in view of *Korn*. Applicant therefore respectfully requests that the rejection of claims 5 and 26 under 35 U.S.C. § 103(a) be withdrawn.

Claims 17 and 37 were rejected under 35 USC § 103(a) as being unpatentable over *Orega* and further in view of U.S. Patent No. 3,959,694 to Walsh (hereafter "*Walsh*"). Applicant respectfully traverses.

The Examiner admitted that *Orega* does not disclose the use of argon gas, but cited *Walsh* for teaching use of argon. Nevertheless, there is no teaching or suggestion in these

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references of the “wetable traces” recited in claims 1 and 22, from which claims 17 and 37 depend.

Thus, claims 17 and 37 would not have been obvious over *Orega* in view of *Walsh*. Applicant therefore respectfully requests that the rejection of Claims 17 and 37 under 35 U.S.C. § 103(a) be withdrawn.

Claims 4 and 25 were rejected under 35 USC § 103(a) as being unpatentable over *Wong* ‘991 and further in view of U.S. Patent No. 6,759,610 to Dove et al. (hereafter “*Dove*”). Applicant respectfully traverses.

*Wong* ‘991 was cited for disclosing a wettable contact region, and *Dove* was cited for teaching a contact region made of platinum. Nevertheless, there is no teaching or suggestion in these references of the “wetable traces” recited in claims 1 and 22, from which claims 4 and 25 depend.

Thus, claims 4 and 25 would not have been obvious over *Wong* ‘991 in view of *Dove*. Applicant therefore respectfully requests that this rejection of Claims 4 and 25 under 35 U.S.C. § 103(a) be withdrawn.

Claims 5 and 26 were rejected under 35 USC § 103(a) as being unpatentable over *Wong* ‘991 and further in view of U.S. Patent No. 6,924,443 to Wong (hereafter “*Wong* ‘443”). Applicant respectfully traverses.

*Wong* ‘991 was cited for disclosing use of mercury, and *Wong* ‘443 was cited for teaching that gallium is an equivalent material. Nevertheless, there is no teaching or suggestion in these references of the “wetable traces” recited in claims 1 and 22, from which claims 5 and 26 depend.

Thus, claims 5 and 26 would not have been obvious over *Wong* ‘991 in view of *Wong* ‘443. Applicant therefore respectfully requests that this rejection of Claims 5 and 26 under 35 U.S.C. § 103(a) be withdrawn.

Claims 17 and 37 were rejected under 35 USC § 103(a) as being unpatentable over *Wong* ‘991 and further in view of U.S. Patent No. 6,720,507 to Wong (hereafter “*Wong* ‘507”). Applicant respectfully traverses.

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The Examiner admitted that *Wong '991* does not disclose the use of argon gas, but cited *Wong '507* for teaching use of argon in a liquid metal switch. Nevertheless, there is no teaching or suggestion in these references of the “wetable traces” recited in claims 1 and 22, from which claims 17 and 37 depend.

Thus, claims 17 and 37 would not have been obvious over *Wong '991* in view of *Wong '507*. Applicant therefore respectfully requests that this rejection of Claims 17 and 37 under 35 U.S.C. § 103(a) be withdrawn.

#### Allowable Subject Matter

The Examiner indicated that claim 43 is allowed.

Claims 2, 3, 7, 9, 10, 12, 15, 16, 21, 23, 24, 28, 30, 31, 32, 35, 36, and 41 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As discussed above, claims 1 and 22 have been amended to recite the limitations of claims 9 and 30, which contain allowable subject matter. Claim 42 has been amended to recite limitations similar to claim 35, which also contains allowable subject matter.

#### Withdrawn Claims

Claims 8, 29, and 44-65 were previously withdrawn as being drawn to a nonelected invention. Applicant respectfully requests that the withdrawn claims be further considered.

Claims 8 and 29 depend from claims 1 and 22, respectively, which should now be in condition for allowance. Claims 1 and 22 are generic to claims 8 and 29.

Independent claims 44 and 65 have been amended to recite “one or more wetable traces interconnecting said first and second plurality of liquid contact regions” like claims 1 and 22. Claims 45-51 and 53-64 depend from claim 44 and thus include the limitations thereof.

Claim 65 has also been amended to recite that the “first and second plurality of liquid contact regions comprise a spiraled pattern of liquid contact regions.” Support for this limitation can be found in original claim 51.

Accordingly, the withdrawn claims should now be in condition for allowance.

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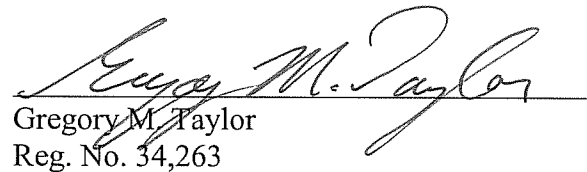
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**CONCLUSION**

Applicant respectfully submits that claims 1-8, 10-29, 31-51, and 53-65 are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at 612-332-4720.

Respectfully submitted,

Date: 8/9/06  
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